

**Water District #34
Mitigation
Itinerary
May 25, 2004**

Mitigation meeting held at the Mackay High School Library, at 3:00 p.m.
On Tuesday May 25, 2004.

Call Meeting to Order: Seth

1. Mitigation – Advisory Board Review
2. Rotation credit into storage for charging the river system –
Calculation Review
3. Review Howell Gage (750 cfs-450 cfs Rule) Dave Nelson
4. Depletion of storage-Futile call

GROUND WATER DELIVERED

1999	19,785 cfs
2000	43,157 cfs
2001	51,142 cfs
2002	42,942 cfs
2003	41,674 cfs

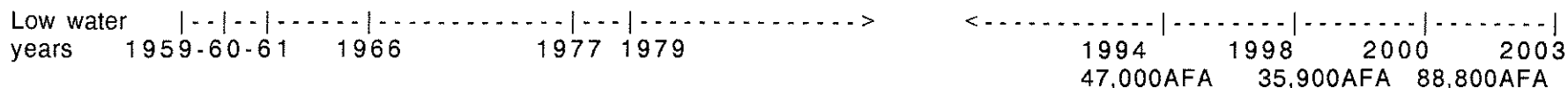
Analysis of Surface Water Rights Calling for Mitigation or Curtailment in 2004 - by Mitchell Sorensen

Owners Name	Right Number	Priority Date	Permitted Acres Irrg.	Rate of Diversion	Annual Volume	Comb. w/GW Div.Rate	Limits Volume	Actual SW	Actual GW	Potential Mitigation	Max. Total Entitlement
Jack J.	34-00372A	1883	152 ac.	3.20cfs	532af*	4.00cfs	532af*	?	?	?	532afa*
L.V. J.	34-00372B	1883	56 ac.	1.60cfs	196af	1.60cfs	196af	?	?	?	196afa@fhd
J.V. J.	34-00690B	1883	86.5 ac.	<u>1.73cfs</u>	<u>303af*</u>	NA	NA	?	NA	?	<u>303afa*</u>
				6.53cfs	1031af						1031afa
Sowards	34-00666	1887	157 ac.	3.20cfs	550af*	4.10cfs	550af*	?	?	?	550af*
Sowards	34-00621B	1892	49 ac.	0.80cfs	172af*	1.22cfs	172af*	?	?	?	172af*
Sowards	34-10872	1896	120/131ac.	<u>2.40cfs</u>	<u>420af*</u>	3.34cfs	420af*	?	?	?	<u>420af*</u>
				6.40cfs	1142af						1142afa

*the annual volume (3.5) afa, has been established by the director as a standard limitation (see Rule 55.02)

→ at the field headgate

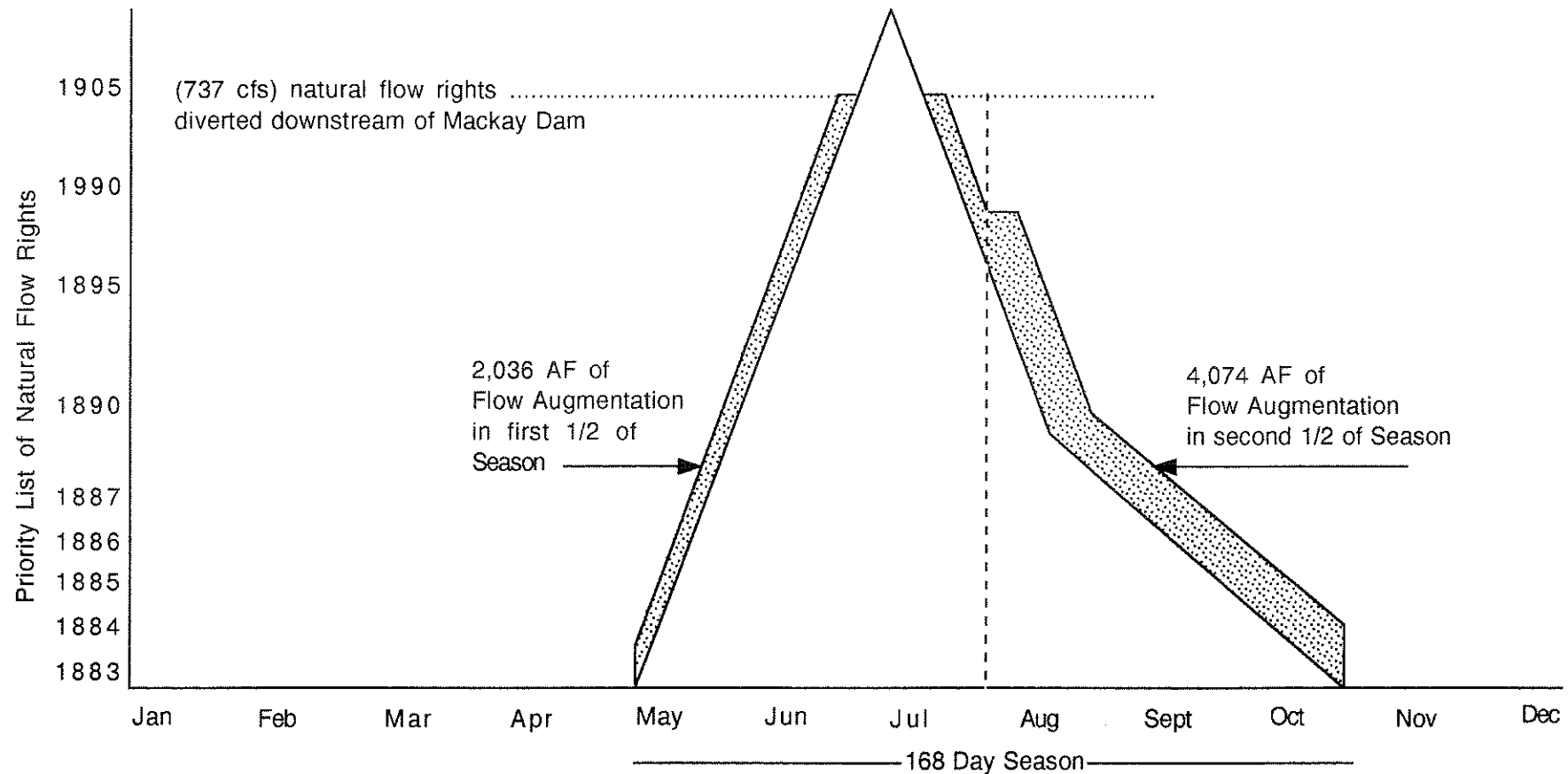
Historic Diversion Data Dates and Recent Annual Groundwater Pumpage



Cause and Effect Factors that are Impacting Surface Flows

- 1.) Recent Changes in Water District and Irrigation District Accounting Procedures
- 2.) An increase in irrigated acres from approx. 60,000 acres in the mid-1960s to approx. 90,000 acres in the 1990s.
- 3.) The expansion or enlargement of surface and ground water rights.
 - a.) Non-regulation of combined rights being split and/or used in excess of combined limitations and on non-appurtenant acres.
 - b.) Non-regulation of ground water diversions used in excess of limiting rates and volumes.
- 4.) The conversion of flood/furrow irrigation to sprinkler irrigation.
- 5.) Groundwater Pumpage

Illustrative Model of Mitigation Plan Pursuant to (Rule 50) - by Mitchell Sorensen

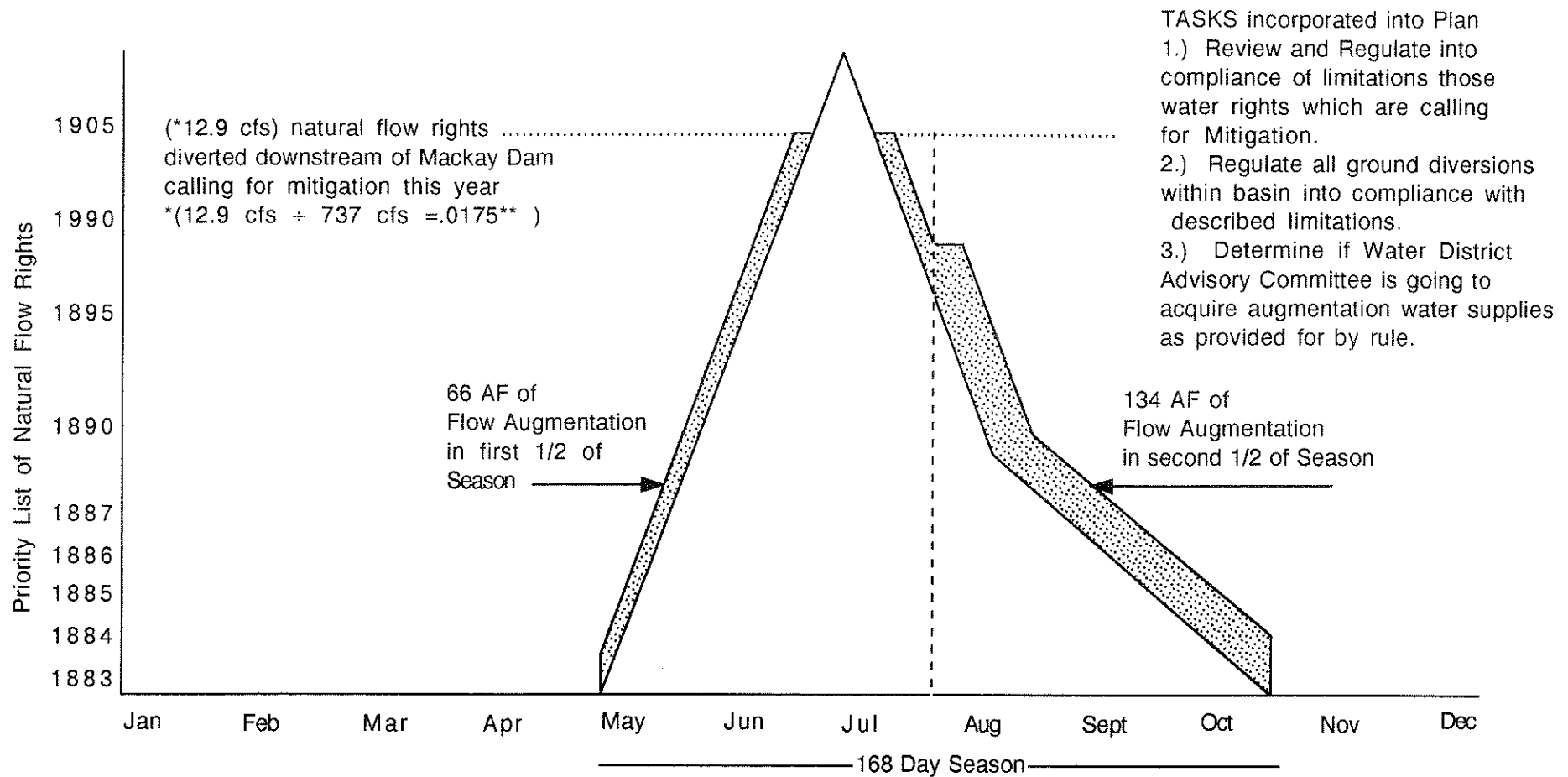


Average Annual Diversions from Wells ----- 47,000 AF
 Estimated River Depletion due to Ground Water Diversions -----13%
 Mitigation Requirement if all 1905 and Senior Surface Rights (737.043 cfs) diverted downstream from Mackay Dam called for Mitigation---- 6,110 AF
 Flow Augmentation made available May 1 - July 23 ----- 2,036 AF
 Flow Augmentation made available July 24- Oct 15 ----- 4,074 AF

OR ("whichever is less")

Direct Augmentation into canal or laterals for Natural Flow Rights calling for Mitigation to the extent water supplies would have been available, absent ground water pumping.

Illustrative Model of Proposed Mitigation Plan Pursuant to (Rule 50) for 2004 Calls - by Mitchell Saversen



Annual Diversions from Wells in 2003 ----- 88,000 AF
 Estimated River Depletion due to Ground Water Diversions -----13%
 Mitigation Requirement for Senior Surface Rights (12.9 cfs) which are diverted downstream from Mackay Dam called for Mitigation
 $88,000 \text{ af} \times 13\% = 11,440 \text{ af} \times .0175^{**} = 200.2 \text{ AF}$ or 5,046 miner in./24hrs
 Flow Augmentation made available May 1 - July 23 ----- 66 AF
 Flow Augmentation made available July 24- Oct 15 ----- 134 AF

OR ("whichever is less")
 Direct Augmentation into canal or laterals for Natural Flow Rights calling for Mitigation to the extent water supplies would have been available, absent ground water pumping.

WATER CONVERSION FACTORS

1 cubic foot of water	7.4805 gallons	62.37 pounds of water
1 cubic foot per second (CFS)	448.83 gallons per minute	26,930 gallons per hour
1 cubic foot per second (CFS)	646.315 gallons per day	1.9835 acre-feet per day
1 cubic foot per second	for 30 days = 59,502 acre-feet	for 1 year = 723.94 acre-feet
1 acre-foot	enough water to cover 1 acre of land one foot deep	43,560 cubic feet
1 acre-foot		325,850 gallons
1 cubic meter per second	35.31 CFS	15,850 gallons per minute
1 million gallons		3.0689 acre-feet
1 million gallons a day (MGD)		1,120.147 acre-feet per year
10 cents per 1,000 gallons		\$32.59 per acre-foot
1 miner's inch	9 gallons per minute	0.02 CFS

REGIONAL OFFICES OF THE IDAHO DEPARTMENT OF WATER RESOURCES
 NORTHERN: 1910 Northwest Blvd., Coeur d'Alene - Tel: (208) 769-1450, FAX: 769-1454
 WESTERN: 2735 Airport Way, Boise - Tel: (208) 334-2190, FAX: 334-2348
 SOUTHERN: 222 Shoshone St. E., Twin Falls - Tel: (208) 736-3033, FAX: 736-3037
 EASTERN: 900 N. Skyline, Idaho Falls - Tel: (208) 525-7161, FAX: 525-7177